

## An Aging Nation Presents New Challenges to the Health Care System

The nation is beginning to reap the benefits of its historical investment in health research and health care. One of the most dramatic indicators of improvement in health is the large number of people surviving to advanced ages. In 1960, just 1 person in 10 was over 65. By the middle of the next century, one person in five is expected to be over 65, a five-fold increase in less than a century. Nearly a quarter of the elderly will be over age 85. Since 1900 we have gained more than 27 years of life expectancy, much of this gain attributed to the development of vaccines, improvements in diet, and other modifications of lifestyle and environment.

The Public Health Service has undertaken an intensive national health promotion and education campaign to convey messages which help people to establish healthy habits and lifestyles. These activities have focused on actions such as smoking cessation, safe drug use, accident prevention, improving nutrition, and exercise. Evidence of the success of this targeted health promotion effort over the last 15 years is reflected in a number of health measures: marked reductions in the major causes of death—more than a 30 percent reduction in heart disease and a 50 percent decline in deaths from cerebrovascular disease, improved survival from many once-fatal forms of cancer due to improved detection and treatment—and fewer days spent by older persons in the hospital, down from 10 days in 1980 to 8.7 days in 1985.

Despite the positive aspects of improved survival, there are problems. As the proportion of older people increases, so do the challenges to the health care system that is confronted with a patient population increasingly characterized by multiple chronic illnesses and significant disability.

The diseases of old age are among the most costly and debilitating, and they often require long-term hospitalization and extended care. While only 5 percent of the older population reside in long-term care facilities at any one time, at least 25 percent of all persons can expect to spend some time in a nursing home during their lifetime.

Over the past century, we have made great strides in reducing deaths from the major killers which undoubtedly contribute to the increased survival of many. However, we have made little or no headway in reducing the incidence of many of the most tragically incapacitating conditions such as dementia, blindness, deafness, and physical disability caused by a variety of age-related disorders. Based on current morbidity rates and the projected growth in numbers of older people, we can expect a dramatic increase in the need for health care in this population.

Impaired mobility is perhaps the most common and important problem for older persons. Half of all persons age 65 and over have some degree of arthritis, one-fifth being limited in their daily activities. Osteoporosis, a condition associated with more than a million fractures annually in the United States, is estimated to cost approximately \$6 billion per year in direct and indirect costs. The consequences of hip fractures, in particular, are severe, with elevated mortality risk and as many as 35 percent of survivors left with permanent disability and dependency. As with other chronic conditions associated with aging, the proportion of persons affected by musculoskeletal diseases is likely to double or triple in the next 50 years.

Another serious problem is that of the dementias of later life. More than 8 percent of the older population is estimated to suffer from severe dementia. Most of these persons have diagnoses of Alzheimer's disease. In an accompanying article in this issue of *Public Health Reports*, a recent economic analysis estimates the total national direct and indirect cost of senile dementia at more than \$87 billion per year. Yet, even this enormous sum does not fully account for the toll the disease takes on patient's families and other caregivers.

Bowel and bladder incontinence accounts for significant limitation of activity in older adults. As many as 16 percent of persons living in the community may have difficulty controlling urination, and incontinence is a major reason for nursing home admission. The condition is responsible for a great deal of embarrassment and major disruption of social activities for most of the people reporting this problem.

Other conditions that affect the quality of life and have negative health consequences are impairments of vision and hearing. Declines in these and other sensory abilities become more severe with advancing age and can jeopardize an older person's safety and ability to function and enjoy life.

All of these areas have been targeted as priorities for research by the National Institute on Aging. Basic and clinical research is enabling older Americans to prevent or delay much of the age-associated decline and its sequelae of chronic disease and disability. Findings related to osteoporosis have resulted in recommendations for a variety of interventions to stave off the effects of the disease. Inroads are being made into understanding the causes of dementia and in achieving reliable diagnosis and potential treatments. Behavioral and pharmacological interventions offer as-

surance that fully 80 percent of all cases of urinary incontinence can now be controlled. And surgical techniques, coupled with innovations in human factors engineering, can help victims of hearing or vision impairment compensate for these losses.

We have already begun to meet our goal of improving the health and quality of life for older people. Biomedical and behavioral research lays the foundation for the interventions that will help ameliorate the effects of age-related diseases and restore or maintain physical and mental functioning. It is this scientific base upon which sound medical care and appropriate services must be developed to ensure that the additional years of life are healthy and enjoyable for all of our citizens.

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